Title (en)

Method of forming an heat treating a plurality of metal castings

Title (de)

Verfahren zur Herstellung und Wärmebehandlung einer Mehrzahl von Metallgusteilen

Title (fr)

Procédé de fabrication et de traitement thermique d'une nombre de pièces coulées

Publication

EP 1356128 B1 20120502 (EN)

Application

EP 02705845 A 20020118

Priority

• US 0201473 W 20020118
• US 26635701 P 20010202

Abstract (en)

[origin: EP2180069A1] An integrated metal processing facility in which molten metal is poured into a series of molds at a pouring station to form metal castings, which are then transferred to a heat treatment line. Prior to introduction of the castings into a heat treatment station of the heat treatment line, the castings are subjected to heating sufficient to arrest cooling of the castings at or above a process control temperature for the metal thereof.

IPC 8 full level

B22D 45/00 (2006.01); **C22F 1/00** (2006.01); **B22D 29/00** (2006.01); **B22D 30/00** (2006.01); **C21D 1/00** (2006.01); **C21D 9/00** (2006.01); C21D 1/52 (2006.01); C21D 1/53 (2006.01)

CPC (source: EP KR US)

B22D 29/00 (2013.01 - EP KR US); **B22D 29/003** (2013.01 - EP US); **B22D 47/00** (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C21D 11/00** (2013.01 - EP US); **C22F 1/00** (2013.01 - EP US); C21D 1/52 (2013.01 - EP US); C21D 1/53 (2013.01 - EP US)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 2180069 A1 20100428; **EP 2180069 B1 20190918**; AT E556155 T1 20120515; AU 2002239968 B2 20080313; CA 2436749 A1 20020815; CA 2436749 C 20111129; CN 102277480 A 20111214; CN 102277480 B 20151216; CN 1526027 A 20040901; EP 1356128 A2 20031029; EP 1356128 B1 20120502; EP 1356128 B2 20160106; JP 2004523362 A 20040805; JP 2008296282 A 20081211; JP 2012071354 A 20120412; JP 2014131818 A 20140717; JP 2016215283 A 20161222; JP 5825985 B2 20151202; KR 100850601 B1 20080805; KR 20030071882 A 20030906; MX PA03006906 A 20040129; US 2002104596 A1 20020808; US 2005257858 A1 20051124; US 2007289715 A1 20071220; US 2008264527 A1 20081030; US 7258755 B2 20070821; US 7641746 B2 20100105; WO 02063051 A2 20020815; WO 02063051 A3 20021114

DOCDB simple family (application)

EP 09179136 A 20020118; AT 02705845 T 20020118; AU 2002239968 A 20020118; CA 2436749 A 20020118; CN 02806682 A 20020118; CN 201110212904 A 20020118; EP 02705845 A 20020118; JP 2002562787 A 20020118; JP 2008187971 A 20080718; JP 2011247980 A 20111111; JP 2014086445 A 20140418; JP 2016193715 A 20160930; KR 20037010223 A 20030801; MX PA03006906 A 20020118; US 0201473 W 20020118; US 18945205 A 20050726; US 5166602 A 20020118; US 83552907 A 20070808; US 83779307 A 20070813